



Does Not Comply
Corrected Diskette Needed

OIFE

Error on p. 2

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/087,714

DATE: 03/20/2002

TIME: 16:04:41

Input Set : A:\DMCI0099.ST25.txt

Output Set: N:\CRF3\03202002\J087714.raw

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3 <110> APPLICANT: Havkin-Frenkel, Daphna
4     Podstolski, Andrzej
5     Dixon, Richard A.
7 <120> TITLE OF INVENTION: Vanillin Biosynthetic Pathway Enzyme From Vanilla Planifolia
9 <130> FILE REFERENCE: DMCI0099
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/087,714
C--> 11 <141> CURRENT FILING DATE: 2002-02-28
11 <150> PRIOR APPLICATION NUMBER: 09/462,576
12 <151> PRIOR FILING DATE: 2000-05-22
14 <150> PRIOR APPLICATION NUMBER: PCT/US98/14895
15 <151> PRIOR FILING DATE: 1998-07-15
17 <150> PRIOR APPLICATION NUMBER: 60/052,604
18 <151> PRIOR FILING DATE: 1997-07-15
20 <150> PRIOR APPLICATION NUMBER: 60/272,415
21 <151> PRIOR FILING DATE: 2001-02-28
23 <160> NUMBER OF SEQ ID NOS: 25
25 <170> SOFTWARE: PatentIn version 3.1
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 1071
29 <212> TYPE: DNA
30 <213> ORGANISM: Vanilla planifolia
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33 atggcagcta agctcctctt ctccctactc ttccctggtct ccgccctctc cgtcgcgctc      60
35 gccggtttcg aagaagacaa tccaatccgg tccgttacac aaaggcctga ctcgattgag      120
37 cctgccatcc tcggcgctcct tggcagttgc cgccacgcct tccacttcgc acggttcgcc      180
39 cgcaggtacg ggaagagcta cggatcggag gaggagatca agaagagggt cgggatcttc      240
41 gtggagaatc tagcgtttat ccggtccact aatcggaagg atctgtcgta taccctagga      300
43 atcaaccaat tcgccgacct gacctgggag gaattccgga ccaatcgctt tggtgccggc      360
45 cagaactgct cggcgactgc gcatggaaac caccggtttg tcgatggcgt gcttcctgta      420
47 acgagggatt ggagggagca agggatagtg agccctgtaa aggaccaagg aagctgtgga      480
49 tcttgctgga ctttcagtag tactggagca ctagaggctg catatacaca gctaactgga      540
51 aagagcacat cattatctga acagcaactt gtggactgtg cctcagcatt caataacttt      600
53 ggatgcaatg gaggtttgcc ttcccaagcc tttgaatacg ttaagtacaa tggaggcatc      660
55 gacacagAAC agacttatcc ataccttggt gtcaatggtg tctgcaactt caagcaggag      720
57 aatgtttggt tcaaggatcat tgattcgata aacatcaccc tgggtgctga ggatgagttg      780
59 aagcatgcag tgggcttggt gcgtccagtt agcgttgcat ttgaggttgt gaaaggtttc      840
61 aatctgtaca agaaagggtg atacagcagt gacacctgtg gaagagatcc aatggatgtg      900
63 aaccaagcag ttcttgccgt cggttatgga gtcgaggacg ggattcctta ttggctcatc      960
65 aagaactcat ggggtacaaa ttggggtgac aatggctact ttaagatgga actcggcaag     1020
67 aacatgtgtg gtgttgcaac ttgcgcattt tatccattg tggctgtgta g              1071
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 352
72 <212> TYPE: PR

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73 <213> ORGANISM: Vanilla planifolia

75 <400> SEQUENCE: 2

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77 Met Ala Ala Lys Leu Leu Phe Phe Leu Leu Phe Leu Val Ser Ala Leu
78 1          5          10          15
81 Ser Val Ala Leu Ala Gly Phe Glu Glu Asp Asn Pro Ile Arg Ser Val
82          20          25          30
85 Thr Gln Arg Pro Asp Ser Ile Glu Pro Ala Ile Leu Gly Val Leu Gly
86          35          40          45
89 Ser Cys Arg His Ala Phe His Phe Ala Arg Phe Ala Arg Arg Tyr Gly
90          50          55          60
93 Lys Ser Tyr Gly Ser Glu Glu Glu Ile Lys Lys Arg Phe Gly Ile Phe
94 65          70          75          80
97 Val Glu Asn Leu Ala Phe Ile Arg Ser Thr Asn Arg Lys Asp Leu Ser
98          85          90          95
101 Tyr Thr Leu Gly Ile Asn Gln Phe Ala Asp Leu Thr Trp Glu Glu Phe
102          100          105          110
105 Arg Thr Asn Arg Leu Gly Ala Ala Gln Asn Cys Ser Ala Thr Ala His
106          115          120          125
109 Gly Asn His Arg Phe Val Asp Gly Val Leu Pro Val Thr Arg Asp Trp
110          130          135          140
113 Arg Glu Gln Gly Ile Val Ser Pro Val Lys Asp Gln Gly Ser Cys Gly
114 145          150          155          160
117 Ser Trp Thr Phe Ser Thr Thr Gly Ala Leu Glu Ala Ala Tyr Thr Gln
118          165          170          175
121 Leu Thr Gly Ser Thr Leu Ser Glu Gln Gln Leu Val Asp Cys Ala Ser
122          180          185          190
125 Ala Phe Asn Asn Phe Gly Cys Gly Gly Leu Pro Ser Gln Ala Phe Glu
126          195          200          205
129 Tyr Val Lys Tyr Asn Gly Gly Ile Asp Thr Glu Gln Thr Tyr Pro Tyr
130          210          215          220
133 Leu Gly Val Met Gly Ile Cys Asn Phe Lys Gln Glu Asn Val Gly Val
134 225          230          235          240
137 Lys Val Ile Asp Ser Ile Asn Ile Thr Leu Gly Ala Glu Asp Glu Leu
138          245          250          255
141 Lys His Ala Val Gly Leu Val Arg Pro Val Ser Val Ala Phe Glu Val
142          260          265          270
145 Val Lys Gly Phe Asn Leu Tyr Lys Lys Gly Val Tyr Ser Ser Asp Thr
146          275          280          285
149 Cys Gly Arg Asp Pro Met Asp Val Asn His Ala Val Leu Ala Val Gly
150          290          295          300
153 Tyr Gly Val Glu Asp Gly Ile Pro Tyr Trp Leu Ile Lys Asn Ser Trp
154 305          310          315          320
157 Gly Thr Asn Trp Gly Asp Asn Gly Tyr Phe Lys Met Glu Leu Gly Lys
158          325          330          335
161 Asn Met Cys Gly Val Ala Thr Cys Ala Ser Tyr Pro Ile Val Ala Val
162          340          345          350

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165 <210> SEQ ID NO: 3<211> 7<212> PRT<213> Artificial Sequence<220><223> Novel Sequence

W--> 167 <211> LENGTH:

W--> 167 <212> TYPE:

↘ "run on"

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Input Set : A:\DMCI0099.ST25.txt

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W--> 167 <213> ORGANISM:
      167 <400> SEQUENCE: 3
      169 Gly Val Leu Pro Val Thr Arg
      170 1 5
      173 <210> SEQ ID NO: 4
      174 <211> LENGTH: 13
      175 <212> TYPE: PRT
      176 <213> ORGANISM: Artificial Sequence
      178 <220> FEATURE:
      179 <223> OTHER INFORMATION: Novel Sequence
      181 <400> SEQUENCE: 4
      183 Asn Ser Trp Gly Thr Asn Trp Gly Asp Asn Gly Tyr Phe
      184 1 5 10
      187 <210> SEQ ID NO: 5
      188 <211> LENGTH: 6
      189 <212> TYPE: PRT
      190 <213> ORGANISM: Artificial Sequence
      192 <220> FEATURE:
      193 <223> OTHER INFORMATION: Novel Sequence
      195 <400> SEQUENCE: 5
      197 Gly Phe Asn Leu Tyr Lys
      198 1 5
      201 <210> SEQ ID NO: 6
      202 <211> LENGTH: 8
      203 <212> TYPE: PRT
      204 <213> ORGANISM: Artificial Sequence
      206 <220> FEATURE:
      207 <223> OTHER INFORMATION: Novel Sequence
      209 <400> SEQUENCE: 6
      211 Gln Gly Ile Val Ser Pro Val Lys
      212 1 5
      215 <210> SEQ ID NO: 7
      216 <211> LENGTH: 20
      217 <212> TYPE: DNA
      218 <213> ORGANISM: Artificial Sequence
      220 <220> FEATURE:
      222 <223> OTHER INFORMATION: Primer 1a 5
      224 <220> FEATURE:
      225 <221> NAME/KEY: misc_feature
      226 <222> LOCATION: (3)..(3)
      227 <223> OTHER INFORMATION: N= Inosine
      229 <220> FEATURE:
      230 <221> NAME/KEY: misc_feature
      231 <222> LOCATION: (6)..(6)
      232 <223> OTHER INFORMATION: N= Inosine
      234 <220> FEATURE:
      235 <221> NAME/KEY: misc_feature
      236 <222> LOCATION: (9)..(9)
      237 <223> OTHER INFORMATION: N= Inosine

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Input Set : A:\DMCI0099.ST25.txt

Output Set: N:\CRF3\03202002\J087714.raw

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239 <220> FEATURE:
240 <221> NAME/KEY: misc_feature
241 <222> LOCATION: (12)..(12)
242 <223> OTHER INFORMATION: N= Inosine
244 <220> FEATURE:
245 <221> NAME/KEY: misc_feature
246 <222> LOCATION: (15)..(15)
247 <223> OTHER INFORMATION: N= I
249 <220> FEATURE:
250 <221> NAME/KEY: misc_feature
251 <222> LOCATION: (18)..(18)
252 <223> OTHER INFORMATION: N= I
254 <400> SEQUENCE: 7
W--> 255 ggngtncctnc cngtnacncg 20
258 <210> SEQ ID NO: 8
259 <211> LENGTH: 20
260 <212> TYPE: DNA
261 <213> ORGANISM: Artificial Sequence
263 <220> FEATURE:
265 <223> OTHER INFORMATION: Primer 1a 5
267 <220> FEATURE:
268 <221> NAME/KEY: misc_feature
269 <222> LOCATION: (3)..(3)
270 <223> OTHER INFORMATION: N= Inosine
272 <220> FEATURE:
273 <221> NAME/KEY: misc_feature
274 <222> LOCATION: (6)..(6)
275 <223> OTHER INFORMATION: N= Inosine
277 <220> FEATURE:
278 <221> NAME/KEY: misc_feature
279 <222> LOCATION: (9)..(9)
280 <223> OTHER INFORMATION: N= Inosine
282 <220> FEATURE:
283 <221> NAME/KEY: misc_feature
284 <222> LOCATION: (12)..(12)
285 <223> OTHER INFORMATION: N= Inosine
287 <220> FEATURE:
288 <221> NAME/KEY: misc_feature
289 <222> LOCATION: (15)..(15)
290 <223> OTHER INFORMATION: N= Inosine
292 <220> FEATURE:
293 <221> NAME/KEY: misc_feature
294 <222> LOCATION: (18)..(18)
295 <223> OTHER INFORMATION: N= Inosine
297 <400> SEQUENCE: 8
W--> 298 cngtnacng gnagnacncc 20
301 <210> SEQ ID NO: 9
302 <211> LENGTH: 41
303 <212> TYPE: DNA

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Input Set : A:\DMCI0099.ST25.txt

Output Set: N:\CRF3\03202002\J087714.raw

304 <213> ORGANISM: Artificial Sequence
 306 <220> FEATURE:
 308 <223> OTHER INFORMATION: Primer 2a 5
 310 <220> FEATURE:
 311 <221> NAME/KEY: misc_feature
 312 <222> LOCATION: (3)..(3)
 313 <223> OTHER INFORMATION: N= t or c
 315 <220> FEATURE:
 316 <221> NAME/KEY: misc_feature
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 318 <223> OTHER INFORMATION: N= Inosine
 320 <220> FEATURE:
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 322 <222> LOCATION: (12)..(12)
 323 <223> OTHER INFORMATION: N= Inosine
 325 <220> FEATURE:
 326 <221> NAME/KEY: misc_feature
 327 <222> LOCATION: (15)..(15)
 328 <223> OTHER INFORMATION: N= Inosine
 330 <220> FEATURE:
 331 <221> NAME/KEY: misc_feature
 332 <222> LOCATION: (18)..(18)
 333 <223> OTHER INFORMATION: N= t or c
 335 <220> FEATURE:
 336 <221> NAME/KEY: misc_feature
 337 <222> LOCATION: (24)..(24)
 338 <223> OTHER INFORMATION: N= Inosine
 340 <220> FEATURE:
 341 <221> NAME/KEY: misc_feature
 342 <222> LOCATION: (27)..(27)
 343 <223> OTHER INFORMATION: N= t or c
 345 <220> FEATURE:
 346 <221> NAME/KEY: misc_feature
 347 <222> LOCATION: (30)..(30)
 348 <223> OTHER INFORMATION: N= t or c
 350 <220> FEATURE:
 351 <221> NAME/KEY: misc_feature
 352 <222> LOCATION: (33)..(33)
 353 <223> OTHER INFORMATION: N= Inosine
 355 <220> FEATURE:
 356 <221> NAME/KEY: misc_feature
 357 <222> LOCATION: (36)..(36)
 358 <223> OTHER INFORMATION: N= t or c
 360 <220> FEATURE:
 361 <221> NAME/KEY: misc_feature
 362 <222> LOCATION: (39)..(39)
 363 <223> OTHER INFORMATION: N= t or c
 365 <400> SEQUENCE: 9

W--> 366 aantcntggg gnacnaantg gggnganaan ggntanttna a

41

VERIFICATION SUMMARY

DATE: 03/20/2002

PATENT APPLICATION: US/10/087,714

TIME: 16:04:42

Input Set : A:\DMCI0099.ST25.txt

Output Set: N:\CRF3\03202002\J087714.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:167 M:282 W: Numeric Field Identifier Missing, <211> is required.
L:167 M:282 W: Numeric Field Identifier Missing, <212> is required.
L:167 M:282 W: Numeric Field Identifier Missing, <213> is required.
L:255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:366 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:477 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:520 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12